

Notice of Allowability

Application No.

10/797,365

Examiner

Jerry Martin Blevins

Applicant(s)

BEER ET AL.

Art Unit

2883

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed February 2, 2006.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Brian Healy
BRIAN HEALY
PRIMARY EXAMINER
ART UNIT 251

DETAILED ACTION

Response to Arguments

Applicant's arguments, see pages 7-10, filed February 2, 2006, with respect to objection to claim 14 and rejection of claims 1-20 have been fully considered and are persuasive. The objection to claim 14 and the rejection of claims 1-20 have been withdrawn.

Allowable Subject Matter

Claims 1-20 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the closest prior art of record, US Pre Grant Publication to Pommer et al., number 2003/0201462 teaches a module (Figures 2A, 2B, 10A, 10B) having a circuit carrier (element 47, Figure 2A and paragraphs 256 and 257, page 21) and having an electro-optical transducer mounted thereon (a VCSEL, element 20), the electro-optical transducer comprising: an optical waveguide holder (ferrule 36, Figures 2A, 2B and paragraphs 256 and 257, page 21) having an optical waveguide receptacle (guide holes 76, Fig. 10A and 76, Fig. 10 B and paragraph 269 page 23), an end side and a mounting area on an edge of the optical waveguide holder (Figures 2A, 2B); an optoelectronic component (VCSEL 20) having an optically active region on an active top side (page 2, paragraph 13) of a semiconductor chip (Figures 10A, 10B, element 19), and having a housing (paragraph 236, page 20) with a housing outer edge side, on

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which is arranged at least one contact area (Figures 2A, 2B, element 37) for electrically connecting the semiconductor chip to the circuit carrier; and wherein the optoelectronic component is arranged with its optically active region on the end side of the optical waveguide holder in such a way that the optical waveguide receptacle and the optically active region are oriented facing one another, wherein the mounting area is arranged essentially at right angles with respect to the end side on the circuit carrier (Figures 2A, 2B, 10A, 10B). However, Pommer, either alone or in combination with the prior art, fails to disclose or render obvious that the end side of the optical waveguide holder is mounted essentially at right angles with respect to the top side of the circuit carrier and that the at least one contact area of the optoelectronic component is oriented facing the top side of the circuit carrier. (Compare Pommel, Figures 2A, 2B, 10A, 10B to applicants Figures 1-3).

Claims 2-14 are allowed based on their dependence from allowed base claim 1.

Regarding claim 15, Pommel teaches a method for producing an electro-optical transducer (VCSEL 20, Figures 2A,2B,10A,10B) comprising: die-casting an optical waveguide holder having an end side (page 7, paragraph 94) and molding-in an optical waveguide receptacle toward the end side and molding-on a mounting area on an edge side of the optical waveguide holder at right angles with respect to the end side (page 6, paragraph 82 and Figures 10A,10B); producing an optoelectronic component (VCSEL 20, Figures 2A,2B,10A,10B), including: applying at least one semiconductor chip (19) having an optically active region to a rewiring structure (indicated by wire bonds 21, 21') comprising flat conductors (page 2, paragraph 13 and page 3, paragraph 27 and

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Figures 2A,2B,10A,10B); connecting the optoelectronic component to the flat conductors via conductor tracks (pages 16 and 17, paragraph 199 and paragraphs 151, 152, page 12); forming at least one contact area of a flat conductor (Figures 2A, 2B, element 37), the contact area being arranged on a housing outer edge; and packaging the optoelectronic component in a housing with the contact area being left free (paragraph 236, page 20); and applying the optoelectronic component to the end side of the optical waveguide holder such that the contact area is essentially parallel with the mounting area and such that the optical waveguide receptacle faces the optically active region (Figures 2A,2B, 10A, 10B). However, Pommer, either alone or in combination with the prior art, fails to disclose or render obvious mounting the optical waveguide holder on a top side of a circuit carrier such that the end side of the optical waveguide holder is essentially at right angles with respect to the top side of the circuit. (Compare Pommel, Figures 2A, 2B, 10A, 10B to applicants Figures 1-3).

Claims 16-18 are allowed based on their dependence from allowed base claim 15.

Regarding claim 19, Pommel teaches a method for producing a module (Figures 2A,2B,10A,10B) having a circuit carrier (element 47, Figure 2A and paragraphs 256 and 257, page 21) and an electro-optical transducer (VCSEL 20) comprising: die-casting an optical waveguide holder having an end side (page 7, paragraph 94) and molding-in an optical waveguide receptacle toward the end side and molding-on a mounting area on an edge side of the optical waveguide holder at right angles with respect to the end side (page 6, paragraph 82 and Figures 10A,10B); producing an optoelectronic component

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(VCSEL 20, Figures 2A,2B,10A,10B), including: applying at least one semiconductor chip (19) having an optically active region to a rewiring structure (indicated by wire bonds 21, 21') comprising flat conductors (page 2, paragraph 13 and page 3, paragraph 27 and Figures 2A,2B,10A,10B); connecting the optoelectronic component to the flat conductors via conductor tracks (pages 16 and 17, paragraph 199 and paragraphs 151, 152, page 12); forming at least one contact area of a flat conductor (Figures 2A, 2B, element 37), the contact area being arranged on a housing outer edge; and packaging the optoelectronic component in a housing with the contact area being left free (paragraph 236, page 20); applying the optoelectronic component to the end side of the optical waveguide holder such that the contact area is essentially parallel with the mounting area and such that the optical waveguide receptacle faces the optically active region (Figures 2A,2B, 10A, 10B); bonding the mounting side of the electro-optical transducer onto an edge region of the circuit carrier (Figure 2A); and connecting the contact area of the electro-optical transducer to a circuit carrier line (page 12, paragraph 151 and Figure 2A). However, Pommel, either alone or in combination with the prior art, fails to disclose or render obvious that the end side of the optical waveguide holder is essentially at right angles with respect to a top side of the circuit carrier. (Compare Pommel, Figures 2A, 2B, 10A, 10B to applicants Figures 1-3).

Claim 20 is allowed based on its dependence from allowed base claim 19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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